WHAT IS CLAIMED IS:

1. A laser microdissection method, in which a nominal cutting line is marked for an object to be cut out from a microscopic specimen, and the object is subsequently cut out in response to a relative motion between a laser beam and the specimen, wherein
   - an electronic image of at least one image detail of the specimen is captured;
   - the image detail is processed using image analysis, at least one object to be cut out being automatically ascertained;
   - and the nominal cutting line around the at least one object to be cut out is automatically defined.

2. The method as recited in claim 1,
   wherein an electronic image is prepared for the subsequent image analysis processing using a contrasting method based on camera or microscope technology.

3. The method as recited in claim 1,
   wherein one or more objects are ascertained by segmenting the electronic image;
   - in that a grayscale value threshold is defined on the basis of the electronic image;
   - and in that, by making a comparison with the grayscale value threshold, the electronic image is converted to a binary image in which only the segmented objects are still contained.

4. The method as recited in claim 3,
   wherein the threshold value is manually set or is automatically defined in an entropy maximization process.

5. The method as recited in claim 1,
   wherein the electronic image is either a grayscale image or a color image.

6. The method as recited in claim 3,
   wherein,

- to ascertain the object to be cut out, specific classification features characterizing the object are defined;
- using image analysis, the actually existing object features of the segmented object are determined from the image and compared to the classification features;
- and, when the object features conform with the classification features, the object is classified.

7. The method as recited in claim 6,
wherein individual feature data records including classification features are defined in each instance for different object types.

8. The method as recited in claim 6,
wherein the classification features are automatically or manually defined in a learning process, in that the classification features are input interactively or are automatically entered by suitably marking the object, for example by a mouse click.

9. The method as recited in claim 6,
wherein the nominal cutting line for the classified objects is automatically defined, and unclassified objects are excluded from the determination of a nominal cutting line.

10. The method as recited in claim 6,
wherein a range of values is defined for at least one classification feature.

11. The method as recited in claim 6,
wherein objects, which border on the edge of the image detail or which are only partially visible in the image detail, are identified by a feature comparison and are then excluded from the determination of a nominal cutting line.

12. The method as recited in claim 1,
wherein

- a plurality of objects disposed in close proximity to one another are combined into a so-called cluster;
- and one single shared nominal cutting line surrounding the cluster is automatically defined.

13. The method as recited in claim 1,
wherein,
- in an additional method step, a mathematical transformation is applied to automatically map the automatically defined nominal cutting line onto a laser cutting line;
- and this laser cutting line is converted into a relative motion between the laser beam and the specimen, thereby producing a laser cut.

14. The method as recited in claim 13,
wherein the relative motion and thus the laser cut are either interactively initiated by a user or are automatically activated.

15. The method as recited in claim 13,
wherein the laser cutting line is automatically generated by the following method steps:
- using image analysis to determine the outer contour of the object or cluster to be cut out;
- converting the outer contour into a numerical code which specifies the nominal cutting line;
- and transforming the nominal cutting line into the laser cutting line.

16. The method as recited in claim 15,
wherein a Freeman code or a chain code is specified as a numerical code.

17. The method as recited in claim 1,
wherein an automatic shading correction is additionally provided, encompassing the following steps:

- recording an empty image, i.e., an image without a specimen;
- storing this image as a shading correction image;
- and using the shading correction image to apply an offset correction to the subsequently recorded images.

18. The method as recited in claim 1,
wherein specific, unwanted objects, that are not designated for microdissection, are removed from the binary image using image analysis morphology.

19. The method as recited in claim 1,
wherein neighboring objects are prevented from being sliced through by providing a defined clearance distance in the specimen.

20. The method as recited in claim 12,
wherein at least one region, which is enclosed by a cluster and which does not belong to the desired cluster, is cut out separately.

21. The method as recited in claim 1,
wherein, to control the results of the process, the automatically ascertained nominal cutting lines are superimposed onto the electronic image by an imaging device.

22. The method as recited in claim 1,
wherein the laser cutting line is scaled as a function of the image magnification.

23. The method as recited in claim 1,
wherein a defined clearance distance of the laser cutting line from the object is [sic] in order to protect the object from damage caused by laser irradiation.

24. The method as recited in claim 1,
wherein imprecise repositioning of the microscope stage is compensated by modifying the nominal cutting line.